Electronic Acknowledgement Receipt				
EFS ID:	7950253			
Application Number:	10693429			
International Application Number:				
Confirmation Number:	2025			
Title of Invention:	MIMO SYSTEM WITH MULTIPLE SPATIAL MULTIPLEXING MODES			
First Named Inventor/Applicant Name:	J. Rodney Walton			
Customer Number:	23696			
Filer:	Kenyon S. Jenckes/MICHAEL PAGUYO			
Filer Authorized By:	Kenyon S. Jenckes			
Attorney Docket Number:	030417			
Receipt Date:	02-JUL-2010			
Filing Date:	23-OCT-2003			
Time Stamp:	17:26:32			
Application Type:	Utility under 35 USC 111(a)			

Payment information:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Foreign Reference	WO03034646.pdf	2233349 715fbca15c4465f64bb44bda97dc19492ddf	no	62
			f89b		

Warnings:

Information:

2	Foreign Reference	WO01071928.pdf	3077191	no	55
2	i oreign Nererence		30081f007834e4abc73f9f40e591eb2ebdf7 644c		
Warnings:					•
Information:					-
3	Foreign Reference	WO04039011.pdf	9901383	no	203
			3b24654b3521a62c1df9a5c63d3a495227d 1236c		
Warnings:					
Information:					
4	Foreign Reference	WO95030316.pdf	412557	no	39
			78b8fa9f90d43d578108ca50a4f95386f7d2 9fb9		
Warnings:					
Information:					
5	Foreign Reference	WO95032567.pdf	2793320	no	43
	, 	'	cc1d6ea263d994af7efe9b93d10413d708d 3a30f		
Warnings:					
Information:					
6	Foreign Reference	WO96022662.pdf	2337937	no	50
-		.,	c9fdb42abd332738b0a9fea57548d5e1bf9 d588c		
Warnings:					
Information:					
7	Foreign Reference	WO97019525.pdf	1173846	no	29
,	i oreign Neierence	vv097019323.pu1	33a4cc69f3507747cacfefc72fcd9cc168992 817	110	29
Warnings:					
Information:					
8	Foreign Reference	WO99016214.pdf	2229462	no	56
8	Foreign Reference	₩099010214.pui	3fdf634f44c2432316654a744cb81bde8589 8879	110	36
Warnings:					
Information:					
	Foreign Reference	W000044270 pdf	1977767	no	49
9	Foreign Reference	WO99044379.pdf	3e1cc1bfeb007736754a01d6606af15a6bdf 9c4b		49
Warnings:			·		-
Information:					·
10	Foreign Reference	WO99057820.pdf	3833193	no	86
	3		bf64f87ab85812ca2310cea69613e2fae7fe8 bf7		
Warnings:					
Information:					

11	Foreign Reference	WO04039022.pdf	2223131	no	50
			2d6a3c4453b804678d61b5693d87b9db8f c3304d		
Warnings:					
Information:					
12	Foreign Reference	WO96035268.pdf	9698015	no	61
			fcf67d3e5afca2d50e0f03c73530fb7743e5a 133		
Warnings:					
Information:					
13	NPL Documents	TIA-EIA-IS-2000-2-A.pdf	11323109	no	448
			2d65692d1ad3e6901cc9b6e77e0d09038ce 26afe		
Warnings:					
Information:					
14	NPL Documents	A_Simple_Transmit_Diversity_ Technique_For_Wireless_Com	1669215	no	8
		munications.pdf	fe1c6afd62b56b5c4a0888a3d71bc53c19a4 a2e0		
Warnings:					
Information:					
15	NPL Documents	High- Rate_Codes_That_Are_Linear_i	14362478	no	56
		n_Space_and_Time.pdf	d798145f4e2a642e5f93a4ff9ad6718d0abe b0c3		
Warnings:					
Information:					
16	NPL Documents	Novel_Space_Time_Processing	417394	no	6
	THE BOCKMENTS	_of_DS_CDMA.pdf	a7a5bdbffea6fa2afd5e4aef853ea7b4067d8 e38	110	
Warnings:		'			
Information:					
17	NPL Documents	MIMO_Transmit_Optimization_ for_Wireless_Communication_	409695	no 3	6
17	NI E Documents	Systems.pdf	f251c7e91529b6c210c82df2d12b77c0b7a3 30dc		
Warnings:			ı		
Information:					
10	NDI Degraments	ETSI_TS_101_761_1_v1_3_1_2	8080790	no	
18	NPL Documents	001_12.pdf	801ff572536d33823fd689f97796be5c358c 4b0c		90
Warnings:					
Information:					
19	NPL Documents	On_implementation_of_bit-	228406	no	5
		loading_algorithms.pdf	cbe1b55ecbac4de3218c59350f777c6edab 4c630		
Warnings:			-		
Information:					

20	NPL Documents	Pseudo_Orthogonal_Multibea m_Time_Transmit_Diversity.		no	5
		pdf	f1fa2ca0e1e2500e3423c254af84472fd96ce 4e4		
Warnings:					
Information:					
21	NPL Documents	Performance_of_MIMO_Syste ms_with_Channel_Inversion.	318300	no	6
		pdf	6bca64210b5d0920bce73d9416f604237ed 93638		
Warnings:					
Information:					
22	NPL Documents	A_new_spatio- temporal_equalization_metho	515499	no	10
		d.pdf	c5e848395ae2ab32d33ea62340056e82c79 e33a2		
Warnings:					
Information:					
23	NPL Documents	Robust_Frequency_Offset_Esti	302268	no	3
		mation_for_Pilot_Symbol.pdf	afcc250684f1d53f7dcaf8a1598ec9325981d 998		
Warnings:					
Information:					
24	NPL Documents	IEEE_802_11a_1999.pdf	3331484	no	93
-			06b809c0830e9e1785e5983ba45ae9b7cbd c010c		
Warnings:					
Information:					
25	NPL Documents	Symbol_rate_processing_for_t he_downlink_of_ds_cdma_syst		no	8
		ems.pdf	036b3e156f2edb435e3498a736e2a371703 3bf7d		
Warnings:					
Information:					
26	NPL Documents	MULTICARRIER_MODULATION_ FOR_DATA_TRANSMISSION_A	1777693	no	8
	, ii 2 5 ccaiments	N_IDEA.pdf	49846a58ed0230151b6e198eaff49d309d4 a0f99		
Warnings:		·	1	•	
Information:					
27	NPL Documents	Utilizing_Quantized_Feedback _Information_in_Orthogonal.	3603426	no	6
		pdf	60d44c451200ad0b083badcab895a345bfd 98796		
Warnings:					
Information:					
		Short-Term_and_Long-	421545	no	5
28	NPL Documents	Term_Diagonalization_of_Corr		110	
28	NPL Documents	Term_Diagonalization_of_Corr elated.pdf	817c57a5cddaf470530b0b155387ac1bbeb 8a230	110	_
28 Warnings:	NPL Documents		817c57a5cddaf470530b0b155387ac1bbeb		

29	NPL Documents	A_Low_Complexity_ML_Chann el_Estimator.pdf	389438	no	5
		ei_Estimator.pui	0b0124aebc95b3f198a5a583a523498dbd5 b565f		
Warnings:					
Information:					
30	NPL Documents	A_Practical_Space- Frequency_Block_Coded_OFD	265176	no	5
		M.pdf 2c89244ef7b119ac3ba152700ae04453d311 Seee			
Warnings:					
Information:			 		
31	NPL Documents	Multichannel_Adaptive_Syste m_357_364.pdf	660811	no	8
		55755psi.	277a35c8cc813d224f44af62e7d9df7ebfaf6 2f0		
Warnings:					
Information:					
32	NPL Documents	High_Data_rate_Transmission_	241986	no	5
		with_Eigenbeam_space.pdf aff51	aff5181de8729df81047dbcd70b5302144dc 5b77		
Warnings:					
Information:					
		V- Blast_An_Architecture_for_Rea	490255		6
33	NPL Documents	lizing_Very_High_Data_Rates.	5fb7ca12bf1035668f358d4c4c7c91ce00ac 47c2	no	
Warnings:		·	<u> </u>		
Information:					
34	NPL Documents	On_Application_of_Multiple_In put_Multiple_Output_Antenna		no	6
		s.pdf	42d81513046847d8b554b00cf666fe2c197 27e49		
Warnings:					
Information:					
35	NPL Documents	Performance_analysis_of_differ ent_algorithms_for_cdma.pdf	466886	no	6
	W L Documents		99576c1ff647aa30b7965a468c26939c3981 2a96		
Warnings:		1			
Information:					
36	NPL Documents	Improved_Adaptive_Downlink _for_OFDM_SDMA_Based_Wir	340196	no	6
36	NPL Documents	eless.pdf	19a8348e424f2487711ddb1db256ec53b05 23ea1		
Warnings:		1	·		
Information:					
37	NPL Documents	High_bandwidth_efficiency_sp ace- time_turbo_coded_modulatio	541845	no	6
		2 24t		ı	
Warnings:		n.pdf	dbda		

			· · · · · · · · · · · · · · · · · · ·		
38	NPL Documents	 Space_Division_Multiplexing_S	423920	no	6
	THE DOCUMENTS	DM_for_OFDM.pdf	03d64a83547b6d8e1f88756e1b5de73b951 67eb0		J
Warnings:					
Information:					
39	NPL Documents	OFDM_FM_frame_synch_for_ mobile_radio_data_communic	1042540	no	12
	THE DOCUMENTS		51bdf2eeb4c2665a83a5ec13d12c409ee04 cbed6		
Warnings:					
Information:					
40	NPL Documents	A_study_on_subcarrier_adapti ve_modulation_system_p400.	1056094	no	2
	pdf	c32e435dddcbc9724f5b331a9dfed0be266 a27fc			
Warnings:					
Information:					
41	NPL Documents	A_mimo_technique_within_th	280002	no	10
	e_UTRA_TDD_standard	e_UTRA_TDD_standard.pdf	7a878a350373111d2eec7fd3a59f8fa3b255 9282		
Warnings:					
Information:					
		Total Files Size (in bytes)	956	32013	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.